Vi-K5000 Keyboard User Manual

V1.0

Document Reference
Vk5000a
Videoswitch
Unit 15 Redfields Industrial Park
Redfields Lane
Church Crookham
Hants GU 520RD

Date
16-July-2015
Tel: 01252-851510
Fax: 01252-851296
Email: sales@videoswitch.co.uk
Web: www.videoswitch.co.uk

Notes:

- LCD display can be easily damaged. Please do not press or exposure in sunshine for a long time;
- The joystick can be easily damaged. If it needs to be repaired, please wrap and ship it by using original or safety packaging;
- This keyboard should be used in certain range of temperature and humidity, referring the technical index.
- Please connect the keyboard correctly as this manual requires.

Items list

Items	**Quantity**	**Note**
DC12V power adapter	1	
10PIN connector	1	
user’s manual	1	

Contents

Main Features. 4
Install Introduction. 5
Back panel interface introduction 5
Vi-K5000 front panel introduction. 7
Key button functions introduction 8
Joystick control introduction. 9
LCD display indication introduction. 9
Keyboard configuration and query. 10
Keyboard menu tree. 10
Configuration illustration. 10
Typical wiring diagram. 11
Control speed dome 11
Control DVR. 12
Technical Specification. 13

Main Features

Vi-K5000 keyboards are compatible with all of our company's full series embedded DVRs. These keyboards can control speed dome and PTZ either directly, or through the DVRs. Also they can control DVRs as well.

Control

Completely replace the all functions of DVR front panel.

Any operation is indicated in LCD display.

One keyboard can manage 31 DVRs maximum.

Control speed dome and PTZ: The speed dome and PTZ address is among 0~254.

Control protocol

Contain 9 kinds of speed dome and PTZ protocol. Users can require installing other specific protocol if the keyboard has not contained. We will send the modified procedure to you to update keyboard procedure via RS-485 communication port, as it does not need to change hardware in advance.

Divided control by host and auxiliary keyboard

Classifying control can be supported in controlling embedded DRV, and 15 auxiliary keyboard can be connected, and the ID ranging from 0 to 15

Classifying control can be supported in controlling quick DOME and decoder, and 15 auxiliary keyboard can be connected, and the ID ranging from 0 to 15.

Features and functions

The flexibility of system is improved wisely as any equipments connect with RS485 can be set in different protocols and baud rates. Due to all the configuration can be done on the LCD display, it is not needed to look for how to change the protocol.

Install Introduction

Back panel interface introduction

Introduction: **Vi-K5000 Back panel interfaces are the same**

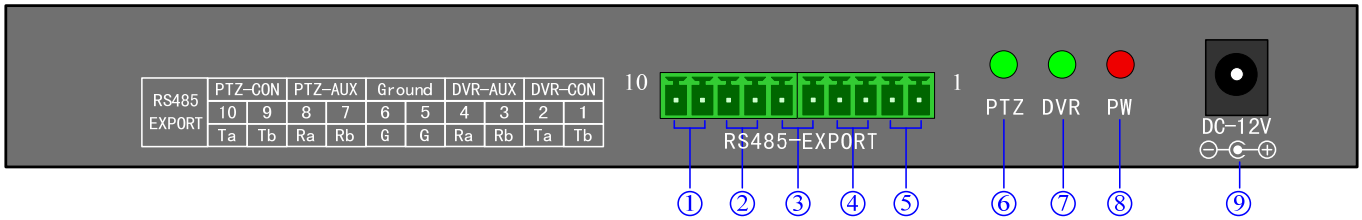


Fig 1

No	Physical interface	Connect introduction
1	Output of control PTZ **PTZ-CON**	Host keyboard connects PTZ RS485 port. Ta is for RS485+, and Tb is for RS485-
2	Input of auxiliary keyboard for PTZ control **PTZ-AUX**	Host keyboard connects auxiliary keyboard for PTZ control. Host keyboard pin8 (**Ra**) connects auxiliary keyboard pin10 (**Ta**), and host keyboard pin7 (**Rb)** connects auxiliary keyboard pin9 (**Tb**). Then auxiliary keyboard can control PTZ.
3	**Ground**	Ground control signal line terminal
4	Input of auxiliary control keyboard for DVR control **DVR-AUX**	Host keyboard connects auxiliary keyboard for DVR control. Host keyboard pin4 (**Ra**) connects auxiliary keyboard pin2 (**Ta**), and host keyboard pin3 (**Rb)** connects auxiliary keyboard pin1 (**Tb**). Then auxiliary keyboard can control DVR.
5	Output of control DVR **DVR-CON**	connect host keyboard pin2 (**Ta**) with DVR **KB** port **D+**, and connect host keyboard pin1 (**Tb**) with DVR **KB** port **D-**
6	**PTZ** control indicator light	In PTZ control mode, the led is green lighted and twinkling.
7	**DVR** control indicator light	In DVR control mode, it is green and twinkling.
8	Power light **PW**	The lamp of keyboard is constantly red lighted on the working state
9	Power input **DC-12V**	DC **12V** power input

Vi-K5000 front panel introduction

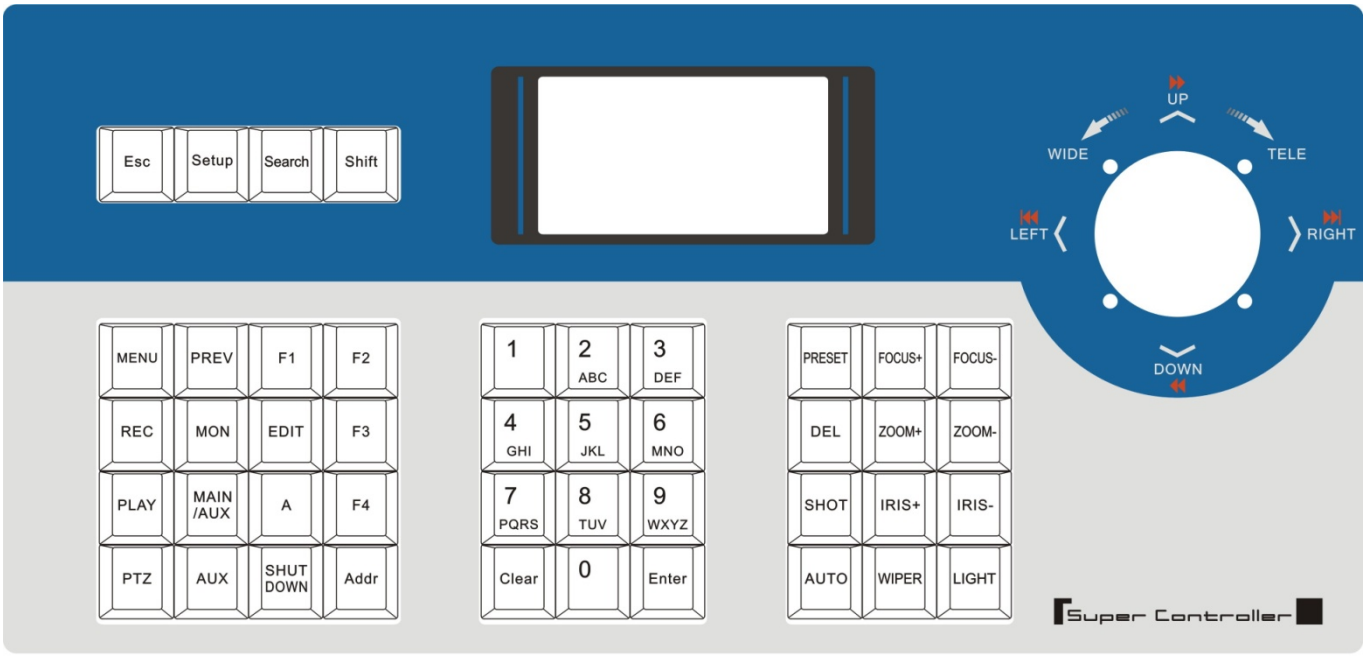


Fig 3

Key button functions introduction

Button name	Function introduction
ESC	back to up-level menu
Setup	hold for 3 seconds, enter into keyboard configuration state (default password: 8888)
Search	press 1 second, check keyboard configuration: PTZ protocol
Shift	switch the control mode of embedded DVR or speed dome
MENU	show the main menu
PREV	switch the previews of single, four, nine, twelve, sixteen screens
F1	Quick key-press of setup speed dome, it is related to used protocol, refer to LCD explanation.
F2	Quick key-press of setup speed dome, it is related to used protocol, refer to LCD explanation.
REC	Enter into DVR manual record menu.
MON	specially control the four auxiliary display output ports of DS-8016HSI (hold for 2 seconds)
EDIT	Enter into DVR edit mode.
F3	Quick key-press of setup speed dome, it is related to used protocol, refer to LCD explanation.
PLAY	Enter into DVR playback menu.
MAIN/AUX	switch the main/aux output port (hold for 2 seconds)
A	switch input ways
F4	Quick key-press of setup speed dome, it is related to used protocol, refer to LCD explanation.
PTZ	Enter into DVR PTZ control menu.
AUX	In DVR control mode, this button is reserved.
Shut Down	power off DVR
Addr	choose addresses of PTZ or the device ID of embedded DVRs
Clear	clean currently input content
ENTER	confirm currently input content
0-9	Number.: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
A – Z	A-Z (26 letters)
PRESET	Setup the speed dome preset position
FOCUS+	set the lens focus near
FOCUS-	set the lens focus far
DEL	Delete the speed dome preset position
ZOOM+	zoom in the lens
ZOOM-	zoom out the lens
SHOT	Call the speed dome preset position
IRIS+	open the lens iris
IRIS-	close the lens iris
Auto	Set the speed dome to auto rotate（depend on speed dome itself, please reference the speed dome's manual）
WIPER	on/off the wiper relay

Light	on/off the light relay

Joystick control introduction

fig	operation	function introduction
	up	In PTZ control mode: control the movement of pan/tilt
		In DVR control mode: play record file fast
	down	In PTZ control mode: control the pan/tilt to move upon
		In DVR control mode: play record file slowly
	left	In PTZ control mode: control pan/tilt to move left
		In DVR control mode: control record file backward
	right	In PTZ control mode: control pan/tilt to move right
		In DVR control mode: control record file forward
	rotate left	zoom in the lens
	rotate right	zoom out the lens

LCD display indication introduction

Any operation is indicated and corresponding in LCD display. The LCD will turn into electricity-save mode (minimum the lightness) in 30 seconds without any operation.

。

Keyboard configuration and query

All the operation of keyboard configuration and query can be done via joystick and certain key buttons.

Keyboard menu tree

Configuration menu tree:

PTZ setup ——— PTZ address ——— corresponding protocol
                                └——— Baud Rate

keyboard parameter）——— password setup
                      ├— Restore default setup
                      ├— Sound setup
                      └— Keyboard ID setup

Inquire Keyboard parameter:

SYSTEM SEARCH ——— model name
                 └— Keyboard serial number

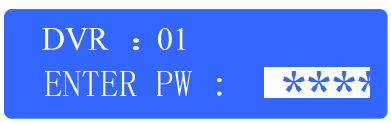
Configuration illustration

Here is a example to illustrate how to set dome: change the communication protocol of dome 002 to PELCO-D, and change the baud rate to 4800.

1. In the mode of standby (fig a), hold the “Setup” button for 3 seconds, login the main menu (fig b);
2. Enter the password (fig c, default password: 8888);
3. Press [Enter], enter into setup menu, operate the Joystick up and down to choose [PTZ SETUP] or [SYS SETUP] (fig d);
4. Choose [PTZ SETUP], press [Enter] to enter in [PTZ SETUP];
5. Operate the Joystick left and right to choose the address of speed dome, e.g. 002（fig e, f）, then press [Enter] to enter the next level menu (fig g);
6. Operate the Joystick up and down to choose communication protocol, e.g. PELCO-D (fig h);
7. Operate the Joystick right to change the baud rate (fig i), and then choose the baud rate up and down (fig j);
8. Press [Enter], then press “ESC” until back to the standby mode (fig a);
9. Configuration is done

a

b



c

d

e

f

g

h

i

CAM :
P: PELCOD BR: 048

j

Typical wiring diagram

Control speed dome

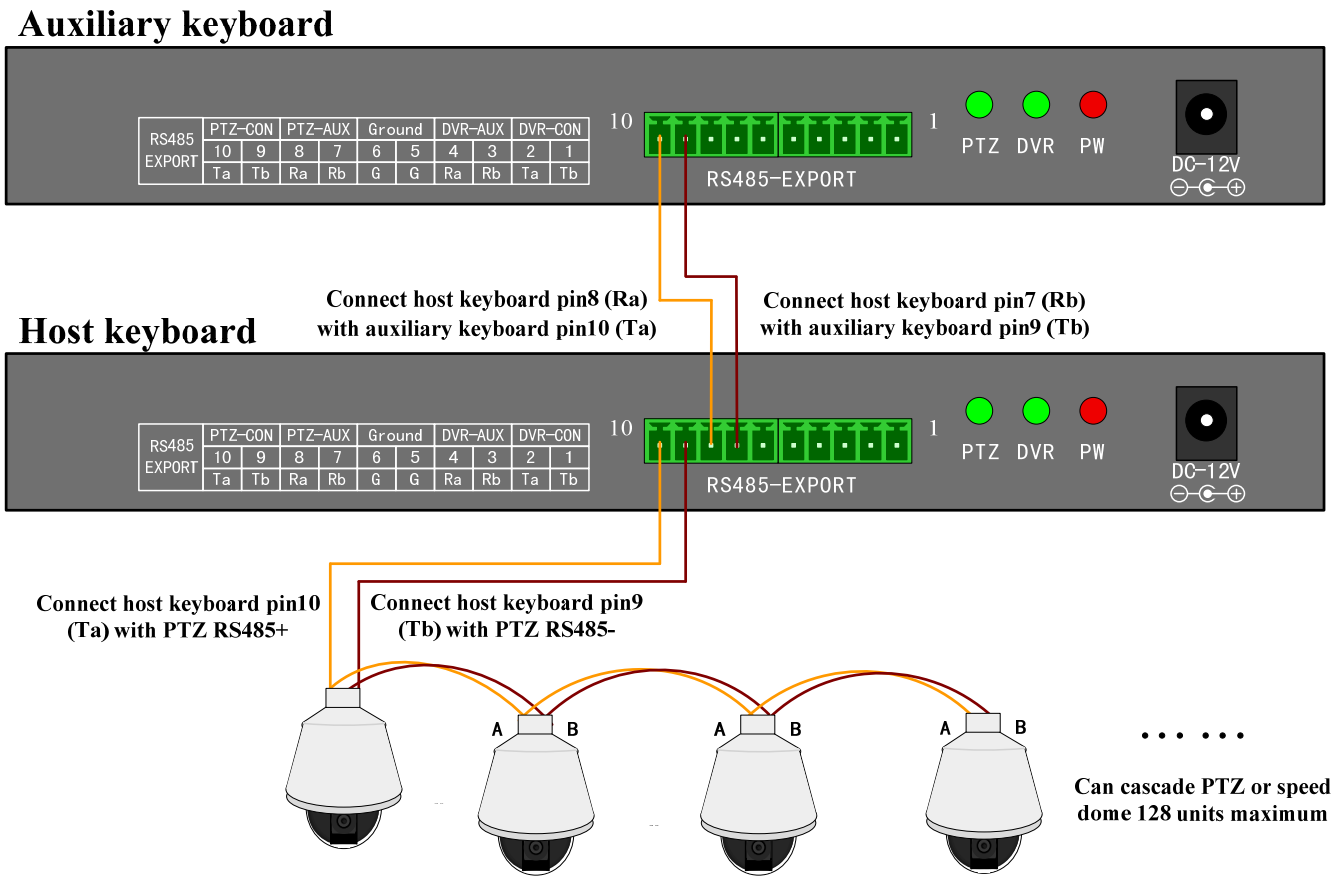

Auxiliary keyboard
RS485 EXPORT
PTZ-CON 10 9 Ta Tb
PTZ-AUX 8 7 Ra Rb
Ground 6 5 G G
DVR-AUX 4 3 Ra Rb
DVR-CON 2 1 Ta Tb
10
1
RS485-EXPORT
PTZ DVR PW
DC-12V
Connect host keyboard pin8 (Ra) with auxiliary keyboard pin10 (Ta)
Connect host keyboard pin7 (Rb) with auxiliary keyboard pin9 (Tb)
Host keyboard
Connect host keyboard pin10 (Ta) with PTZ RS485+
Connect host keyboard pin9 (Tb) with PTZ RS485-
A B
Can cascade PTZ or speed dome 128 units maximum

Figure 4

Control DVR

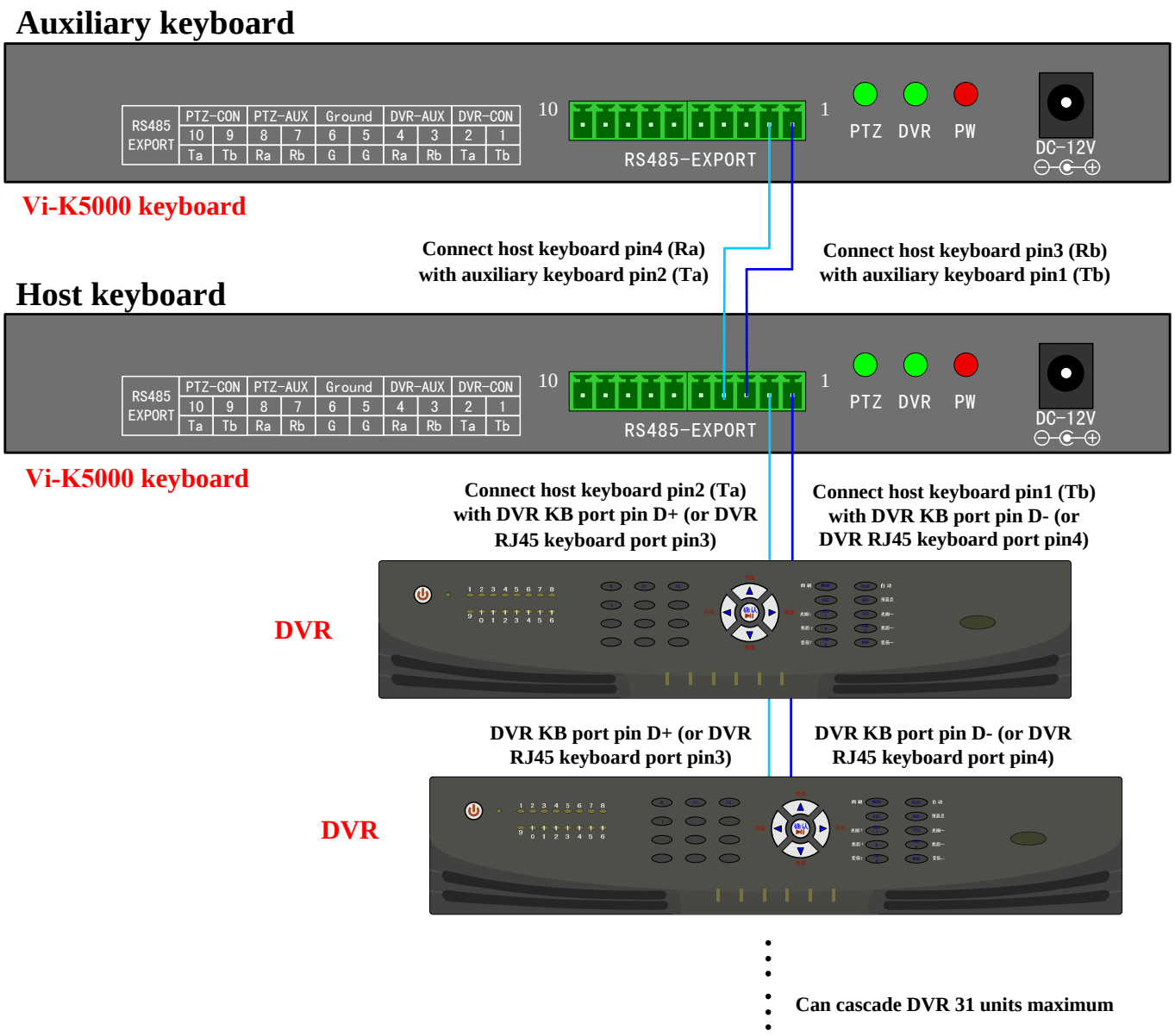

Auxiliary keyboard
RS485 EXPORT
PTZ-CON 10 9 Ta Tb
PTZ-AUX 8 7 Ra Rb
Ground 6 5 G G
DVR-AUX 4 3 Ra Rb
DVR-CON 2 1 Ta Tb
10
1
RS485-EXPORT
PTZ DVR PW
DC-12V
Vi-K5000 keyboard
Connect host keyboard pin4 (Ra) with auxiliary keyboard pin2 (Ta)
Connect host keyboard pin3 (Rb) with auxiliary keyboard pin1 (Tb)
Host keyboard
Vi-K5000 keyboard
Connect host keyboard pin2 (Ta) with DVR KB port pin D+ (or DVR RJ45 keyboard port pin3)
Connect host keyboard pin1 (Tb) with DVR KB port pin D- (or DVR RJ45 keyboard port pin4)
DVR
DVR KB port pin D+ (or DVR RJ45 keyboard port pin3)
DVR KB port pin D- (or DVR RJ45 keyboard port pin4)
DVR
Can cascade DVR 31 units maximum

Figure 5

Technical Specification

Keyboard model	Vi-K5000	
Supported DVR number	31	
Supported PTZ number	255	
Control mode	RS-485 half-duplex mode Baud rate: 1200 ~ 19200bps	
Communication interface	RS-485 port	
LCD screen	128mm*64mm	
Joystick	3D	
Maximum cable length	1200m	
Power supply	DC 12V	
Working temperature	-10℃-- +55℃	
Working humidity	10%--90%	
Size	360mm*200mm*108mm	
Weight	3.3Kg	